

Dabrowski, E.

Achievements of the Tarnowskie Gory Chemical Works  
in 1961. Przem chem 41 no.5:282. Mj '62.

DABROWSKI, Boleslaw; MALIK, Bernard, dr.

Isolation and chromatography separation of "rude" glycofrangulin  
from Rhamnus frangula L. bark. Acta Pol. pharm. 21 no.3:281-286  
'64

1. Z Laboratorium Działalnego Poznańskiego Zakładu Zdrojów  
"Herbapol" (Kierownika dr. B. Malek).

DABROWSKI, C.

Using containers for the shipment of goods. p. 59 PRZEGLAD KOLEJOWY  
(Wydawnictwa Komunikacyjne) Warszawa. Vol. 7, no. 2, Feb. 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress,  
Vol. 4, no. 12, December 1955

DABROWSKI, C.

RECORDED IN THE NAME OF THE VEHICLE  
AS A VEHICLE OF THE 1ST CLASS. DOCUMENT #1100  
WILL BE PROVIDED TO THE 1ST CLASS SECTION.  
The vehicle was used by the 1st Class Section  
with full controls, however, due to the 1st Class Section  
not being able to move the vehicle, it was moved by the 2nd  
Class Section. The vehicle was used by the 1st Class Section. Cross  
actions for the second shift of 1st Class Section were held on  
by 1,000/5 and 10,000/100, respectively. Standard Shift will

A-18-55  
PMT

DABROWSKI C.

4G3c  
4EM

5639

829.13.562.339.17 8

Beszczyński J., Czarnecki S., Dabrowski C., Nocoń P., Paczeński,  
Pawlakiewicz J., Sółka Z. Conceptual Design of 35,000 dwt Nuclear

Tanker.

"Projekt koncepcyjny zbiornikowego 35 000 TDW z silownią ja-  
drową". Budownictwo Okrętowe. No. 4-5, 1958, pp. 84-89, 4 figs.

The authors give an idea of a first Polish nuclear ship. The note  
includes: constructional description, characteristics and spacial arran-  
gement of the shop; power unit (selection of the type of reactor,  
characteristics of the primary circulation, secondary circulation, main  
drive installation, efficiency, auxiliary mechanisms, generator of NC  
steam, emergency drive). Utilization problems are also introduced,  
together with a comparative analysis of economic effects of nuclear  
and conventional drives as applied to a 35,000 dwt tanker.

DABROWSKI, C.  
ZELAZNY, R.

Controlled thermonuclear reactions at the 2d International Conference on the  
Peaceful Uses of Atomic Energy in Geneva. p. 39

KOSMOS. SERIA B: PRZYRODA NIEMOZYWIONA. (Polskie Towarzystwo Przyjednikow im. Kopernika )  
Warszawa. Vol. 5, no. 1, 1959

Poland/

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, no. 6, June 1959  
Uncl.

DARROWSKI, C.; ZELASNY, R.

Reactor physics at the 2d Conference on the Peaceful Uses of Atomic Energy in 1953.  
p. 137.

AGSMOS. SERIA B: FREYCDA NIEOZYMIONA. (Polskie Towarzystwo Przyjaciolikow im.  
Kopernika) Warszawa, Poland. Vol. 5, no. 2, 1959.

Monthly List of East European Acquisitions (EMAI) LC, Vol. 8, no. 8, August, 1959.  
UNCL

30581  
P/046/61/006/011/003/004/  
D216/D304

21.5210

AUTHORS: Bocużyk Jacek, Dąbek Wacław, Dąbrowski Cyryl, Józefowicz Krystyna, Kozmiński Jerzy, Suwalski Witold, Tępa Jerzy, and Weiss Zbigniew

TITLE: Experimental analysis of the use of the "EWA" reactor for some pile-oscillator measurements

PERIODICAL: Nukleonika, v. 6, no. 11, 1961, 717 - 734

TEXT: This paper investigates the sensitivity of moderator purity determinations in the WWR-S "EWA" reactor of the Polish Academy of Sciences at Swierk using various methods. A preliminary report of the work has already been published (Ref. 6: W. Dąbek Nukleonika, 5, 415, 1960). The periodic change in neutron density caused by harmonic oscillation of an absorbing sample causing small reactivity changes may be written

$$\frac{n(t) - n_{av}}{n_{av}} = \sum_{m=1}^{\infty} g^{(m)} e^{j(m\omega t + \varphi^{(m)})} + \sum_{m=1}^{t} l^{(m)} e^{j(m\omega t + \psi)} =$$

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$$= \sum_{m=1}^{\infty} R^{(m)} e^{j(m\omega t + \theta^{(m)})} \quad (?)$$

where  $n(t)$  and  $n_{av}$  are the time dependent and average neutron densities,  $G^{(m)}$ ,  $L^{(m)}$ ,  $R^{(m)}$  are the relative amplitudes of the  $m$ -th harmonics of the global (general reactor), local and resultant signals,  $\varphi^{(m)}$ ,  $\chi$  and  $\theta^{(m)}$  are the phase angles of the global, local and resultant signals, and the period of oscillation of the sample  $T = 2\pi/\omega$ . Fundamental harmonics only are considered, the other being eliminated by the apparatus or by computation.  $G$  and  $L$  depend upon the absorber content of the sample, and the global and local signal sensitivities  $g$  and  $l$  may be expressed

$$g = \frac{G_x - G_0}{G_0} \quad (8a)$$

$$l = \frac{L_x - L_0}{L_0} \quad (8b)$$

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where  $x$  = equivalent number of boron nuclei per million moderator nuclei, and the subscripts  $x$  and  $o$  refer to signals for samples with and without absorbing impurities respectively. Similarly, the sensitivity of the resultant signal,  $\vartheta$ , may be defined in terms of the phase angle

$$\vartheta = \frac{1}{x} (\theta_x - \theta_o) \quad (8c)$$

Measurements were made at 300 W reactor power with as low xenon poisoning as possible. The sample was oscillated in the core in an empty fuel channel with one detector in an adjacent fuel channel and one in the thermal column (detecting the resultant and global signals respectively). For reactor stability, the cooling system is not operated. Samples were made of 200 - 250 ccs. of moderator with varying contents of boric acid (100-1000 ppm of boron), and were contained in aluminum or plexiglass. The large amounts of poison were necessary due to the low sensitivities of signals and apparatus. The detectors were differential ionization chambers, used with mirror galvanometers, electrometric dc amplifiers with 100 % feedback and a constant current compensating circuit. 1. Static method: Eq. (8a)

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may be also expressed in terms of the fundamental harmonics of the  $k_{eff}$  change for samples with and without impurities, and these may be computed from statically measured characteristics of the change in  $k_{eff}$  obtained during the sample oscillation. Simultaneously, the adjacent detector determines the characteristics of the local change in neutron density and  $\vartheta$  may be found from Eq. (8b). Finally,  $\vartheta$  may be obtained from Eq. (8c) by

$$\vartheta = \frac{d\theta}{dx} \Big|_{x=0} = \mp (g + 1) \frac{\sin \varphi}{\frac{1 + a^2}{a} + 2 \cos \varphi} \quad (10)$$

where  $a = L_o/G_o$  and the upper and lower signs refer to  $\alpha \approx 0$  and  $\alpha \approx \pi$  (in phase and counter-phase oscillations) respectively.  $\varphi$  and the relation between  $G$  and the change in  $k_{eff}$  may be computed or determined experimentally. The sample was positioned at the required point, and the reactor was balanced by a fine control rod which gave the appropriate value of  $k_{eff}$ .

2. Kinetic method: Global and resultant signals are recorded on oscilograms during oscillations of the sample. Parasitic phase shifts  $\delta_G$  and  $\delta_B$

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of the global and resultant signals occur, and are eliminated by performing two oscillations, one with  $\alpha = 0$  and one with  $\alpha = \pi$ , of the same sample. Since the parasitic effects are the same for both oscillations, they may be removed by combining the observations.  $\varphi$  is determined from this by a method of successive approximations, and the correct L and  $\theta$  values and hence l and  $\lambda$  are computed. The analysis becomes even simpler for small  $\varphi$  and  $(L/G)\alpha - \pi > 2$ . The sample was mechanically oscillated with T variable from 1 - 22 seconds and amplitude from 50 - 430 mms. The reactor was balanced before and during the oscillations and once the oscillations were constant, a set of about 10 was recorded on oscilloscopes. At least 5 periods of the R and G signals were harmonically analyzed with accuracy up to the third harmonic. For measurements in the core with graphite samples, the signal sensitivities are, to an accuracy of 20%, - g and l both  $\sim 0.8\%$ /ppm, and  $\lambda \sim 0.3^\circ$ /ppm - all for optimum experimental conditions. These are lower by two orders of magnitude than those obtainable in thermal reactors, and similar results are found for other moderators. They are due to the high contribution of the slowing-down process to G and L, in comparison with which the absorption contribution is hardly observed. The self-shielding effect of boron is a factor 0.5 for samples containing 500-

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Experimental analysis of ...

-1000 ppm of boron. Measurements in a horizontal channel in the water reflector gave slightly lower sensitivities, but were not pursued due to experimental difficulties and unpromising results. Static method measurements in the horizontal thermal column channel gave promising results for 1. The results indicate a considerable increase in the effective delayed neutron fraction in comparison with the data of Keepin, Wimett and Zeigler (Ref. 7: Phys. Rev., 107, 1044, 1957). Preliminary estimates give this as  $0.0081 \pm 0.0009$ , and the mean prompt neutron lifetime as  $100 \pm 30$  sec. The static and kinetic methods give consistent sensitivities. The authors acknowledge W. Frankowski, Head of Reactor Engineering Division IBJ, P. Szulc and L. Labno, in charge of teams of Reactor Operation Division IBJ, Dobrski, Kulman and Kwiatek for cooperation in reactor measurements, Post for elaborating the oscillator mechanical drive, Miss Brozyna and Miss Maniecka for scanning the oscillograms, and Mrs. Sawicka, leader of the computer team from the Applied Mathematics Division IBJ. There are 8 figures and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: D. Breton, First Geneva Conferences Paper P/356, 1955; G.R. Keepin, T.F. Wimett, R.K. Zeigler, Phys. Rev., 107, 1044, 1957

Card 6/7

X

Experimental analysis of ...

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P/046/61/006/011/003/004  
D216/D304

ASSOCIATION: Polish Academy of Sciences. Institute of Nuclear Research, Warsaw. Reactor Engineering Department

SUBMITTED: July, 1961

Card 7/7

X

DABROWSKI, Czeslaw (Poland)

General problems of energy balance and energetistic index  
numbers. Ipari energia 5 no.3:54 M '64.

ADAMSKI, L.; BAJBOR, Z.; DABEK, W.; KOZIEL, J.; SUWALSKI, W.; BOUZYK, J.;  
BUKOWSKI, K.; DABROWSKI, C.; KUBOWSKI, J.; RZESZOT, T.; SZECHTER, A.

Critical and exponential assemblies at the Institute of Nuclear  
Research, Warszawa-Swierk. Nukleonika 9 no.7/8:539-550 '64

1. Institute of Nuclear Research, Warszawa-Swierk.

DIPLOMATIC, D.

Examination of the effectiveness of investments in industrialization. p.92.  
ECONOMIC POLICY (Moscow: Sovnarkhoz Technicheskay Pressura)  
Vol. 16, no. 3, Mar. 1956

See Most Recent Accessions List Vol. 1, No. 1 September 1956

DABROWSKI, E.

Repair and building groups within fishery teams. p. 16.  
Vol. 8, no. 4, Apr. 1956 Warszawa GOSPODARKA RYBNA

SOURCE: East European Accession List (EEAL) Library of Congress  
Vol. 5, no. 8, August 1956

~~EYRYL~~ DABROWSKI, E

POLAND/Nuclear Physics

c-8

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11308

Author : Debrowski Eyryl

Inst : Not given

Title : Experimental Nuclear Reactor. I.

Orig Pub : Postepy fiz., 1956, 7, No 5, 389-418

Abstract : No abstract.

Card 1/1

DABROWSKI, E.

Applications of adrenocorticotropic hormone in obstetrics and gynecology. Polski tygod. lek. 7 no. 45:1477-1478 10 Nov 1952.  
(CLML 24:1)

1. Of the Institute of Mother and Child (Director--Prof. F. Groar, M.D.) and of the Second Obstetric-Gynecological Clinic (Head--Prof. W. Sowinski, M.D.) of Warsaw Medical Academy.

DABROWSKI, Edward

Treatment of inflammatory states of the adnexa with novocaine  
block. Gin.polska 26 no.2:149-156 Apr-June '55.

1. Z Kliniki Poloznictwa i Chorob Kobiecych Instytutu Matki  
i Dziecka. Kierownik: doc.dr J. Lesinski. Instytut Matki i dzie-  
cka. Warszawa, Madalinskiego 25.

(PROCAINE, therapeutic use,  
adnexitis, nerve block)

(PROCAINE, therapeutic use,  
adnexitis, nerve block)

(ANESTHESIA, REGIONAL,  
procaine block in adnexitis)

DABROWSKI E.

Choroby kobiec[e] (Women diseases) by E. Dabrowski. Reported in New Books  
(Nowe Ksiazki.) March 1, 1956.

DABROWSKI, Edward

Results of psychoprophylactic method of painless labor.  
Polski tygod. lek. 11 no.42:1786-1790 15 Oct 56.

1. Z Kliniki Poloznictwa i Chorob Kobiecych Instytutu  
Matki i Dziecka w Warszawie; dyrektor prof. F. Groer;  
kierownik Kliniki: doc. dr. J. Lesinski. Warszawa, ul.  
Madalinskiego 25, Instytut Matki i Dziecka.

(LABOR,

painless, psychoprophylactic method (Pol))

DABROWSKI, Edward

Possibilities of application of sleep therapy in gynecology  
and obstetrics. Gin. polska 27 no.3:303-311 May-June 56.

1. Z Kliniki Poloznictwa i Chorob Kobiecych Kierownik: prof.  
Doc. dr. J. Lesinski i Instytutu Matki i Dziecka w Warszawie  
Dyrektor: prof. dr. F. Groer, Instytut Matki i Dziecka, Klinika  
Poloznictwa i Chorob Kobiecych Warszawa, ul. Madalinskiego 25.

(GYNECOLOGICAL DISEASES, therapy,

sleep ther. (Pol))

(SLEEP, therapeutic use,  
in gyn. & obst. (Pol))

DABROWSKI, Edward

Diphtheric vulvovaginitis in the course of pregnancy.  
Gin. polska 27 no.6:705-708 Nov-Dec 56.

1. Z Inst. Matki i Dziecka. Klinika Poloznictwa i Chorob  
Kobiecych; Dyrektor: prof. dr. F. Froer, Kier. Kliniki:  
doc. dr. J. Lesinski, Warszawa, ul. Mndalinskiego 25.

(PREGNANCY, complications  
vulvovaginitis, diphtheritic (Pol))

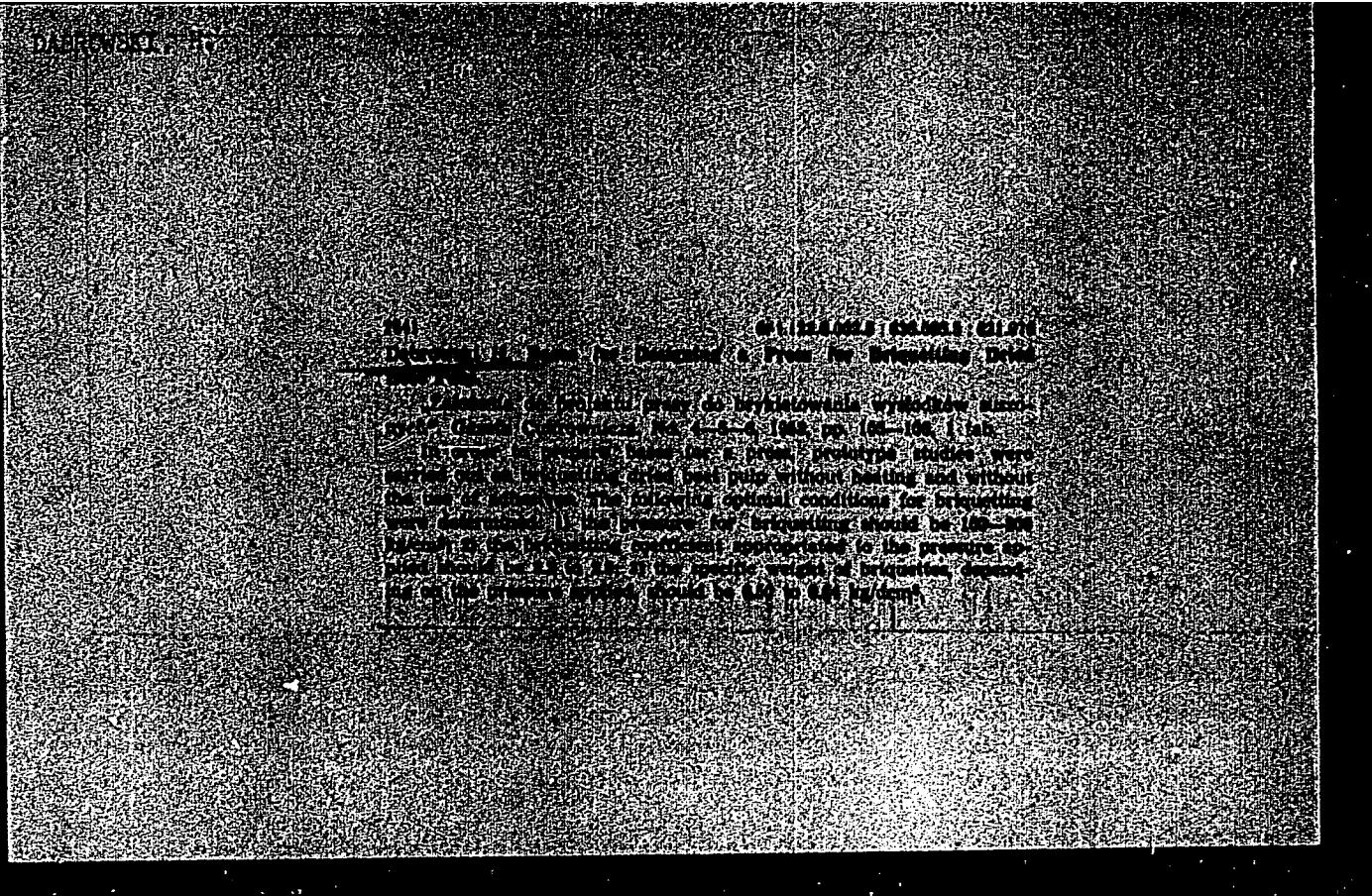
(VAGINITIS, in pregnancy  
(same)

(VULVITIS, in pregnancy  
(same)

(CORYNEBACTERIUM DIPHTHERIAE, infections  
causing vulvovaginitis in pregn. (Pol))

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520005-5



APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520005-5"

RECORDED, 11.

The subject, 1955-1960, was identified as a member of the Communist Party of India. He is described as being approximately 5' 7" tall, with dark hair and brown eyes. He is wearing a light blue shirt and dark trousers.

RECORDED, 1955-1960, was identified as being approximately 5' 7" tall, with dark hair and brown eyes. He is wearing a light blue shirt and dark trousers.

DABROWSKI, #

POLAND/Chemical Technology. Chemical Products and Their  
Application. Part 1. - Checking and Measuring  
Devices. Automatic Control.

H

Abs Jour: Ref. Zhurnal Khimiya, No 21, 1958, 71112.

Author : Henryk Dabrowski.

Inst :

Title : Automatic Areometer.

Orig Pub: Gaz. cukrown., 1957, 59, No 12, 325-326.

Abstract: An areometer for continuous measuring of specific gravity of liquids in the range of 10 to 50° Brix with a reading accuracy of  $\pm 0.5^{\circ}$  Brix is described. The principle of the instrument action is continuous weighing of the liquid flowing through its spherical receiver. Directions concerning the mounting of the areometer, its calibration and using are

Card : 1/2

**"APPROVED FOR RELEASE: 07/12/2001**

**CIA-RDP86-00513R000509520005-5**

DABROWSKI, H.

"Closer cooperation with state and collective farms will improve the terms and quality of their supplies," Gospodarka Wiejska, Warszawa, Vol 5, No 6, June 1954, p. 9.

SO: Eastern European Accessions List, Vol 3, No 11, Nov 1954, L.C.

**APPROVED FOR RELEASE: 07/12/2001**

**CIA-RDP86-00513R000509520005-5"**

CHODERA, L.; SZERESZewska, H.; ROZYNEK, M.; DABROWSKI, H.; PISKORZ, A.;  
PATELSKI, J.; FILIPEK, H.

Vascular changes in experimental mechanical jaundice with  
hyperlipemia. Polskie arch.med. wewn. 30 no.7:1006-1009 '60.

1. Z I Kliniki Chorob Wewnętrznych A.M. w Poznaniu Kierownik:  
prof. dr med. S.Kwasniewski.

(JAUNDICE OBSTRUCTIVE exper)

(LIPIDS blood)

(CARDIOVASCULAR SYSTEM pathol)

DARROWSKI, J.

"Cultivating Roadsides in the Wronowice Community", p. 43, (EWAZ ROL IOTNO, Vol. 3  
No. 5, May 1954, Warszawa, Poland).

SO: Monthly List of East European Acquisitions, (EBAL), LC, Vol. 4, No. 5,  
May 1955, Wash.

DAPKOFSKI, J.

A case of winter irrigation, p.31.  
CZESKAI KELA (Czeskaia Organizacija Technicznaja) Warsaw  
Vol. 16, no. 1, Jan. 19

So. East European Accesions List Vol. 4, no. 9 December 1957

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520005-5

1. In 1951, the Central Intelligence Agency was established.

2. The Central Intelligence Agency was established in 1951.

3. The Central Intelligence Agency was established in 1951.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520005-5"

DABROWSKI, J.

3710

060.816 : 074.816.2 : 060.973.16.002.22 : 681.8  
Dabrowski J., Hartel J. The Possibilities of Using Certain Kinds of Tim-  
ber Waste Products for Manufacturing Structural Elements from Gypsum MN

Concrete.

„Możliwości wykorzystania niektórych odpadów drzewnych do pro-  
dukacji gipsobetonowych elementów budowlanych”. Materiały Budowla-  
ne, No. 11, 1954, pp. 296–301, 8 figs., 8 tabs.

Gypsum concrete plates with organic filler aggregates, are very  
valuable for the building industry. In order to introduce this new build-  
ing material, laboratory and semi-pilot plant tests have been carried  
out with gypsum concrete plates and an organic aggregate (wood sha-  
vings). The results of tests have given satisfactory results.

(1)

DABROWSKI, J.

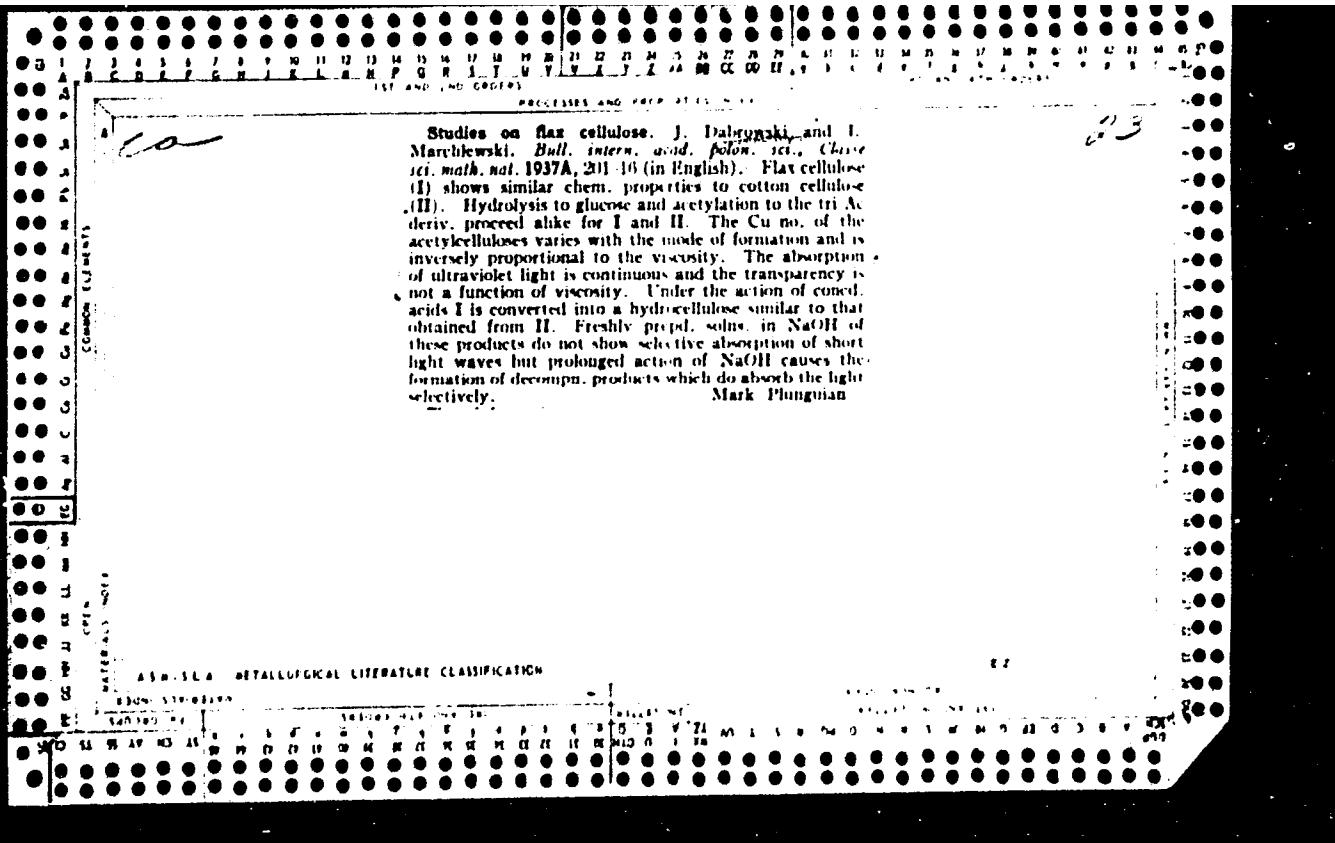
Scientific and research works of the Institute of Construction Technique,  
p. 90d7 (PRZEGLAD BUDOWLANY, Warszawa, Vol. 27, no. 3, Mar. 1955.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jun. 1955,  
Uncl.

DABROWSKI, J.

Possibilities of exploiting sawdust for production of plates and building materials,  
p. 90c-90d (PRZEGLAD BUDOWLANY, Warszawa, Vol. 27, no. 3, Mar. 1955.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jun. 1955,  
Uncl.



DABROWSKI, J.

"Use of local bast fiber in the textile industry." p. 37. (CDMIEC, Vol. 4, no. 2, Feb. 1953, Lodz, Poland)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 5, May 1954, Uncl.

DABROWSKI, J.

"The course of textile research work of the Institute of Industrial Design."  
p. 115. (ODZIEZ, Vol. 4, no. 5, May 1953, Lodz, Poland)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 5, May 1954, Uncl.

DABROWSKI, J.

"The influence of moisture on the production process of spinning." p. 147.  
(CZIEZ, Vol. 4, no. 7, July 1954, Lodz, Poland)

SO: Monthly List of East European Acquisitions, L. C., Vol. 3, No. 5, May 1954, Uncl.

DABROWSKI, J.

DABROWSKI, J. The knitting industry at the 7th International Clothing Competition.  
p. 279. Vol. 7, no. 10, Oct. 1956. CDZIEZ. Lodz, Poland.

SOURCE: East European Accessions List (EEAL) - Sl. 6, v. 4--April 1957

KORYCKA, Waleria; DABROWSKI, Jan

A gold medal for a textile machine factory in Bielsk. Przegl  
tech [84] no.8:8 24 F '63.

KORYCKA, Waleria; DABROWSKI, Jan

The Power Triangle: Peak No.1. Przegl techn 84 no.46:9 17 N '63.

KORYCKA, Waleria; DABROWSKI, Jan

A short cut but glorious history. Przegl techn 84 no.48:9  
1 D '63.

KORYCKA, Waleria; DABROWSKI, Jan

Arsenal of Polish Filmmen. Przegl techn 84 no.50:8 15 D '63.

KORYCKA, Waleria; DABROWSKI, Jan

Center of the Polish cotton industry. Przegl techn 84  
no. 31: 7 4 Ag '63.

KORYCKA, Waleria; DABROWSKI, Jan

The Rybnik Coal District as we do not know it. Przegl  
techn 85 no. 13: 7 29 Mr '64.

KORYCKA, Waleria; DABROWSKI, Jan

Dionysiac industry. Przegl techn 84 no. 39: 8 29 S '63.

KORYCKA, Waleria ;Dabrowski, Jan

"Maie in Milanowek". Przegl techn 84 no.41:9 13 0'63

KORYCKA, Waleria; DABROWSKI, Jan

Sirens on the Sola River. Przegl techn 84 no.51: 9 22 D'63.

KORYCKA, Waleria; DABROWSKI, Jan

The Polish power triangle. Przegl techn 84 no.52:10  
29 D'63.

DABROWSKI, Jan

Liquids of the 20th Century. Horyz techn 17 no. 2: 14-15 F '64.

DABROWSKI, Jan

Metal of two epochs. Horyz techn 17 no.3:25-26 Mr '64.

KORYCKA, Waleria; DABROWSKI, Jan

Gdansk Shipyard. Przegl techn 85 no.6:5 9 F'64.

KORYCKA, Waleria; DABROWSKI, Jan

Test case of the Kasprzak Works. Przegl techn 85 no. 11:  
7,9 15 Mr '64.

KORYCKA, Waleria; DABROWSKI, Jan

The new aspect of the Steel Works in Rakow. Przegl techn 85 no.21:7  
24 My '64.

STARZEWSKI, Wojciech; DABROWSKI, Jan; GORNA, Maria

Treatment of acute adnexitis by paravertebral procaine block.  
Polski tygod. lek. 9 no.36:1156-1158 6 Sept 54.

1. Z Kliniki Poloznictwa i Chorob Kobiecyh Slaskiej Akademii  
Medycznej w Zabrsu. Kierownik: prof. dr W.Starzewski.

(PROCAINE, therapeutic use,  
adnexitis, nerve block)

(ADNEXITIS, therapy,  
procaine nerve block)

(ANESTHESIA, REGIONAL,  
procaine block in adnexitis)

DABROWSKI, Jan (adres autora: Zabrze, Sadowa 13)

Indications for caesarean section including cases of infection.  
Ginekol pol 25 no.2:123-134 Ap-Je '54. (EHAL 3:8)

1. Z Kliniki Polonictwa i Chorob Kobiecych Slaskiej Akademii  
Medycznej z Zabrsu. Kierownik: prof. dr Wojciech Starzewski.  
(CAESARAN SECTION,  
\*indic.)

DABROWSKI, Jan

Modified concept of surgery of uterine myomas in older women.  
Polski tygod. lek. 11 no.31:1370-1374 30 July 56.

1. Z Wojewodzkiego Szpitala Polozniczo-Ginekologicznego w  
Siemianowicach Slaskich; dyrektor; dr. J. Dabrowski.  
Siemianowice Sl., Gen. Swiercza wskiego 15, Wojew. Szpital  
Polozn.-Ginekol.

(UTERUS, neoplasms,  
myoma, surg. in aged (Pol))  
(MYOMA,  
uterus, surg. in aged (Pol))

DABROWSKI, Jan.

Influence of the calcium-phosphorus metabolism of the pregnant woman on development of the fetus. Gin. polska 28 no.2:165-169 Mar-Apr 1956.

1. Z Kliniki Polonictwa i Chorob Kobiecych Ślaskiej A.M. w Zabrzu. Kierownik: prof. dr. W. Starzewski. Zabrze, Sadowa 13.

(PREGNANCY, metabolism in

calcium & phosphorus, eff. on develop. of fetus (Pol))

(FETUS,

eff. of maternal calcium-phosphorus metab. on develop. (Pol))

(CALCIUM, metabolism

maternal, in pregn., eff. on develop. of fetus (Pol))

(PHOSPHORUS, metabolism

(same))

DABROWSKI, Jan

Attempted clinico-laboratory evaluation of shock in gynecological  
and obstetric interventions. Gin. polska 28 no.4:427-436 July-Aug  
56.

1. Z Wojewodzkiego Szpitala Poloznicza-Ginekologicznego w  
Siemianowicach Slaskich. Dyrektor: dr. J. Dabrowski.  
Siemianowice Slaskie, ul. Swierczewskiego 15 - Szpital  
Polozniczy.

(GYNECOLOGICAL DISEASES, surgery,  
perop. shock (Pol))  
(SHOCK, etiology and pathogenesis,  
gyn. & obst. surg. (Pol))

OLEŚ, Andrzej; DĄBROWSKI, Jan; DZIOK, Antoni; KURZEJA, Kazimierz

A case of anthrax of the skin. Polski tygod. lek. 16 no.52:2023-2024  
25 D '61.

1. Z Oddziału Zakaznego Szpitala Powiatowego w Jarosławiu; ordynator  
Oddziału: dr med. Jan Dąbrowski i z Działu Epidemiologii Wojewódzkiej  
Stacji Sanatarno-Epidemiologicznej w Rzeszowie; kierownik Działu:  
lek. med. Andrzej Oles, dyrektor Stacji: lek. med. Zygmunt Mazurek.  
(SKIN dis) (ANTHRAX case reports)

KORYCKA, Waleria; DABROWSKI, Jan

The Chemical Works in Oswiecim, an industrial enterprise planted on  
blood. Przegl techn 84 no.14:8 7 Ap '63.

MIC, Stefan; KOCIOŃSKI, Zbigniew; MŁODOWSKI, Jan

Electrochemical measuring transducers of mechanical magnitudes.  
Tomary 10 no.8:331-337 1964

1. Department of Physical Chemistry, University, Warsaw.

DABROWSKI

PROPERTIES AND METHODS

CA

7

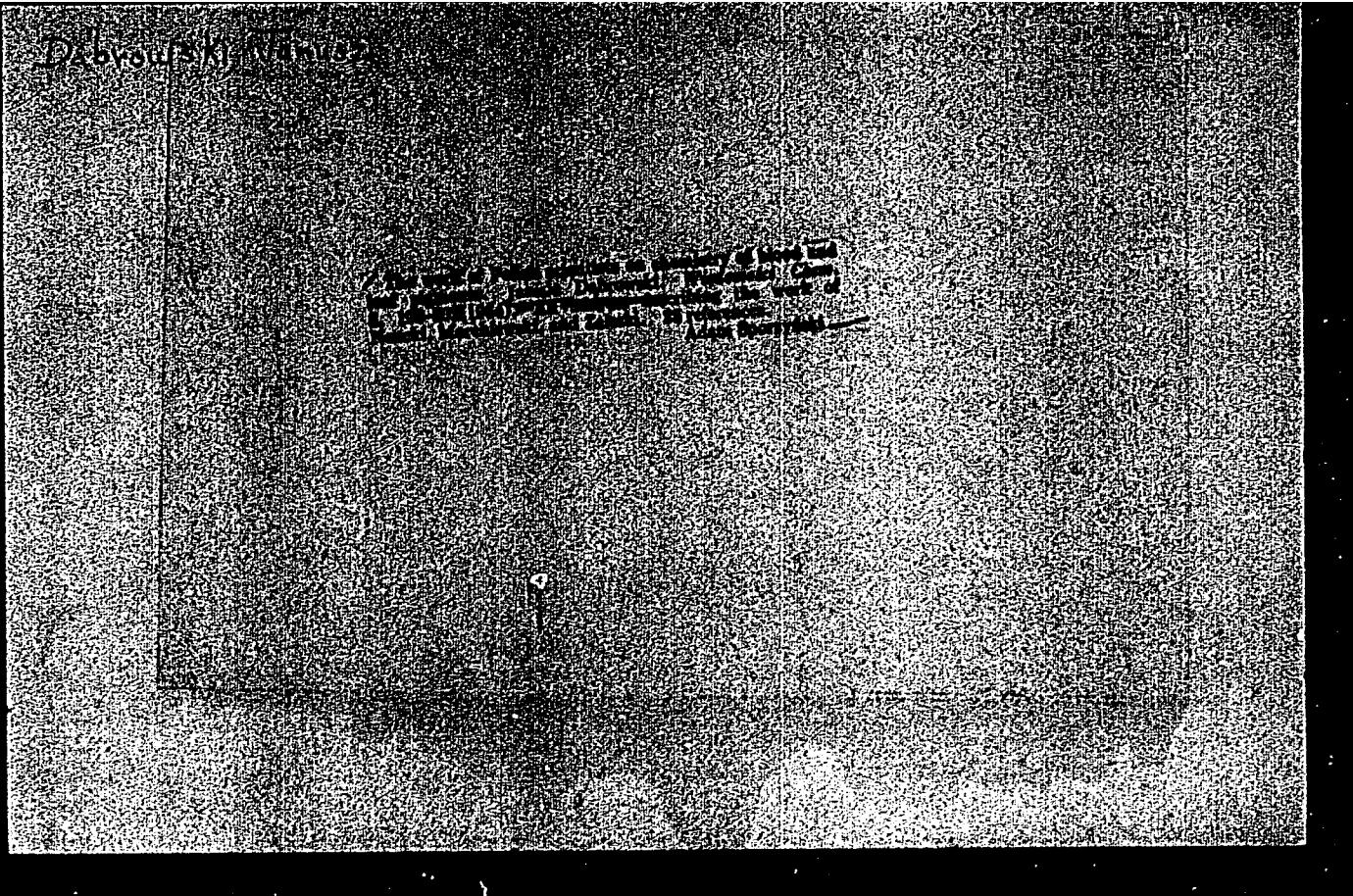
Spectrophotometric determination of minute quantities of zinc in organic substances. J. Dabrowski and L. Marchlewski. *Biochem. Z.* 282, 387 (1935). *Bull. Akad. Polon. Nauk, math. nat.* 1935 A, 429 S5. Zn is pptd. as the 8-hydroxyquinaline compd. This is decompl. by HCl and the 8-hydroxyquinaline-HCl is detd. by its extinction quotient. The org. matter is ashed at 500° in a quartz dish, and the ash is warmed with 1 cc. concd. HCl, dilut. with H<sub>2</sub>O and filtered. The filtrate is add. to bring the HCl concn. to about N. Bring to a boil and pass H<sub>2</sub>S for 2 min. to ppt. any Cu. Filter again, wash with HCl satd. with H<sub>2</sub>S, and evap. to 1 cc. Add 0.25 cc. 20% citric acid, neutralize with NH<sub>4</sub>OH to methyl orange, then add 0.25 cc. of a special mixt. (20 cc. HCOOH, 3 cc. NH<sub>4</sub>OH and 20 g. (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> made up to 100 cc.) and 0.2 cc. HCOOH. Warm to 40° and pass in H<sub>2</sub>S, bring to a boil, then cool while passing H<sub>2</sub>S. Collect the ppt., wash with H<sub>2</sub>O, dissolve in a little 2 N HCl, evap. partly and make alk. with NH<sub>4</sub>OH and remove the excess NH<sub>4</sub>OH by warming. Dil. the soln. to 80 cc. and ppt. the Zn as Zn(C<sub>8</sub>H<sub>7</sub>NO)<sub>2</sub> with 5 cc. of the 8-hydroxyquinaline reagent (4 g. 8-hydroxyquinaline and 8 cc. AcOH in 100 cc.) after first adding 2 cc. 30% AcOH and 3 g. AcONa and warming to 40°. Heat to 50° and leave overnight. Wash the ppt. with H<sub>2</sub>O, dissolve in 2 N HCl, make up to vol. and exam. in a spectrophotometer. From the data of  $\alpha$  the concn. is detd. from a nomogr. - S. Morgenstern

ASH SLA METALLURGICAL LITERATURE CLASSIFICATION

REF ID: A624

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520005-5



APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520005-5"

DABROWSKI, JANUSZ

POLAND / Organic Chemistry. Theoretical Organic  
Chemistry.

G-1

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1133.

Author : Hurwic, J., Radzikowski, J., Dabrowski, J.

Inst : Not given.

Title : The Investigation of a Tautomerism in  $\alpha$ -amino-  
vinyl Acids by Measuring the Dielectric Constant  
of their Solutions.

Orig Pub: Roczn. chem., 1958, 32, No 1, 159-161.

Abstract: The tautomerism revealed previously (RZhKhim, 1955,  
400057, 1957, 26610) by means of refractometric and  
spectroscopic measurements in  $\beta$ -aminovinyl ketones  
 $RCOCH = CHNHR'$ ;  $RC(OH) = CHCH = NR'$   
la R =  $C_2 H_5$ , R' = H; b R = n -  $C_3 H_7$ , R' = H;  
c R = R' =  $CH_3$ ; d R = iso -  $C_4 H_9$ , R' =  $CH_3$ ) is

Card 1/2

Politech, Warsaw

Janusz Dabrowski

Distr: 4E3d/4E2c(j)

*6*  
Imido-enamine tautomerism. IV. Infrared spectra of  
alkyl 2-alkylaminovinyl ketones and of their copper salts.  
Janusz Dabrowski and Urszula Dabrowska (Politech.,  
Warsaw). Roczniki Chem. 32, 821-38 (1958) (German sum-  
mary); cf. C.A. 51, 8844e; 52, 13819b.—The results of  
spectral and refractometric investigations indicate the forma-  
tion of tautomeric mixts. of the alkyl 2-alkylaminovinyl  
ketones  $\text{RCOCH:CHNHR}' \rightleftharpoons \text{RC(OH):CHCH:NH}'$ . The  
tautomerie equil. is, contrary to the unsubstituted ketones  
 $\text{RCOCH:CHNH}_2 \rightleftharpoons \text{RC(OH):CHCH:NH}_2$ , shifted to the  
left side.  
At Kreglewski

*2-may*  
*2*

POLAND / Physical Chemistry. Molecule. Chemical Bond. B-4

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 22292.

Author : Dabrowski, Janusz.

Inst : Not given.

Title : Concerning the Unsuitability of Using the Concepts of Specific Exaltations of Molar Refraction and Dispersion.

Orig Pub: Roczn. chem., 1958, 32, No 3, 637-646.

Abstract: Literature data concerning refraction  $R_D$ (exp.) for  $\lambda = 5890 \text{ \AA}$  and  $t = 20^\circ$  of 55 compounds having conjugate bonds are collected. The theoretical magnitudes of refraction  $R_D$ (theor.) of the same compounds are computed as sums of atomic refractions and increments. Two different magnitudes of  $R_D$ (theor.) are obtained for each compound, one

Card 1/3

DABROWSKI, J.

Imide-enamine tautomerism. V. Isolation of polar tautomeric forms  
of propyl- $\beta$ -aminovinylketones. Bul Ac Pol chim 7 no.2:93-95 '59.  
(EEAI 9:7)

1. Katedra Chemii Organicznej Politechniki Warszawskiej. Vorgelegt  
von T.Urbanski.

(Imides) (Amines) (Propyl group)  
(Vinyl group) (Ketones) (Amino group)

DABROWSKI, J.; KAMIENSKA, K.

Imine-enamine-tautomerism. VII. Cryometric investigations of the transformation of  $\beta$ -aminovinyl ketones. Bul chim PAN 8 no.9:  
461-466 '60.

1. Katedra Chemii Organicznej, Politechnika, Warszawa. Presented by T. Urbanski.

(Imines) (Amines) (Tautomerism) (Aminovinyl ketones)

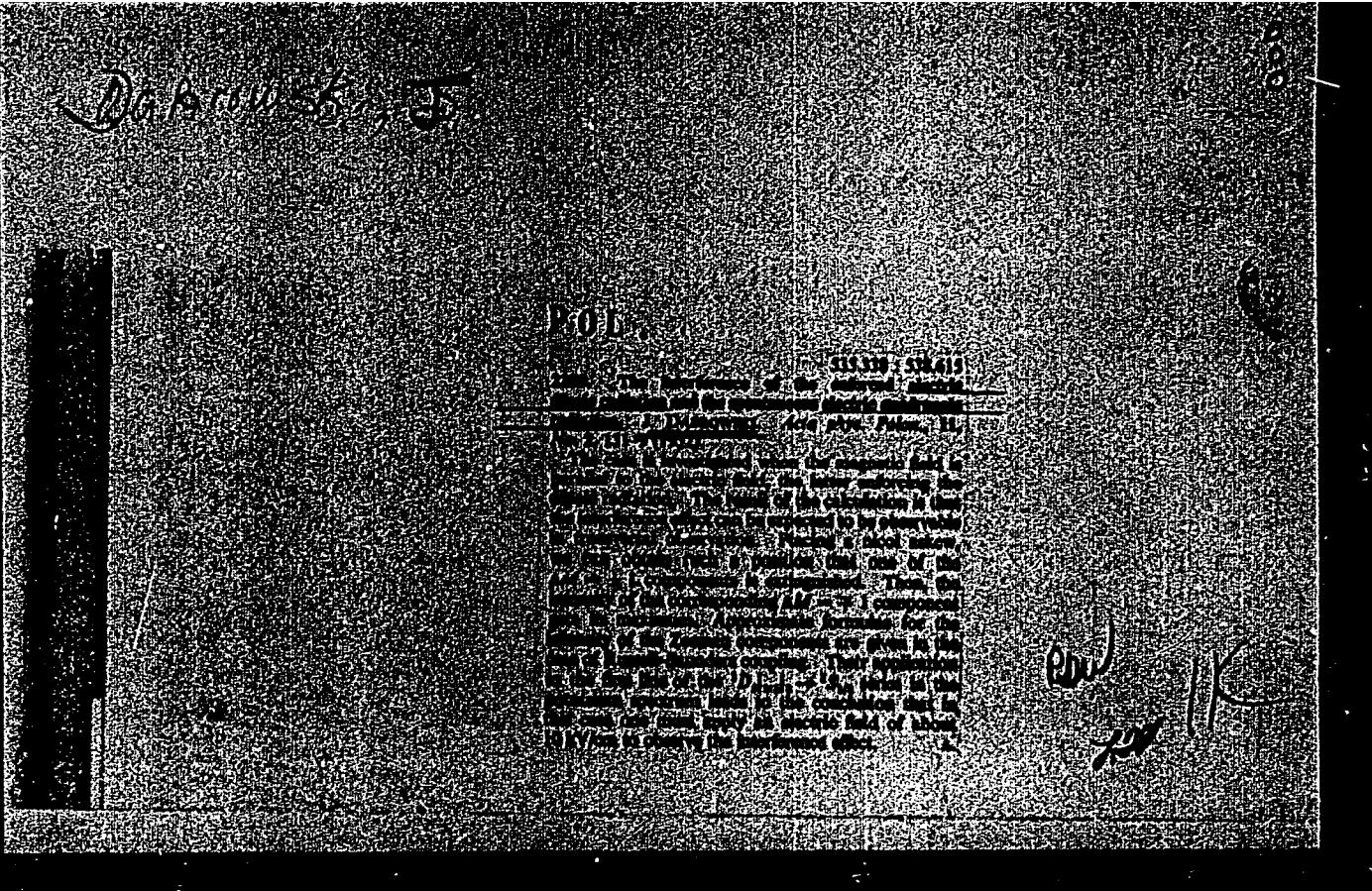
DABROWSKI, J.; TERPINSKI, J.

Isolation of individual forms from tautomeric mixtures of some  
alkyl- $\beta$ -aminovinylketones. *Bul chim PAN* 9 no.12:779-783 '61.

I. Katedra Chemii Organicznej, Politechnika, Warszawa, i Zaklad  
Syntezy Organicznej, Polska Akademia Nauk, Warszawa. Presented by  
T. Urbanski.

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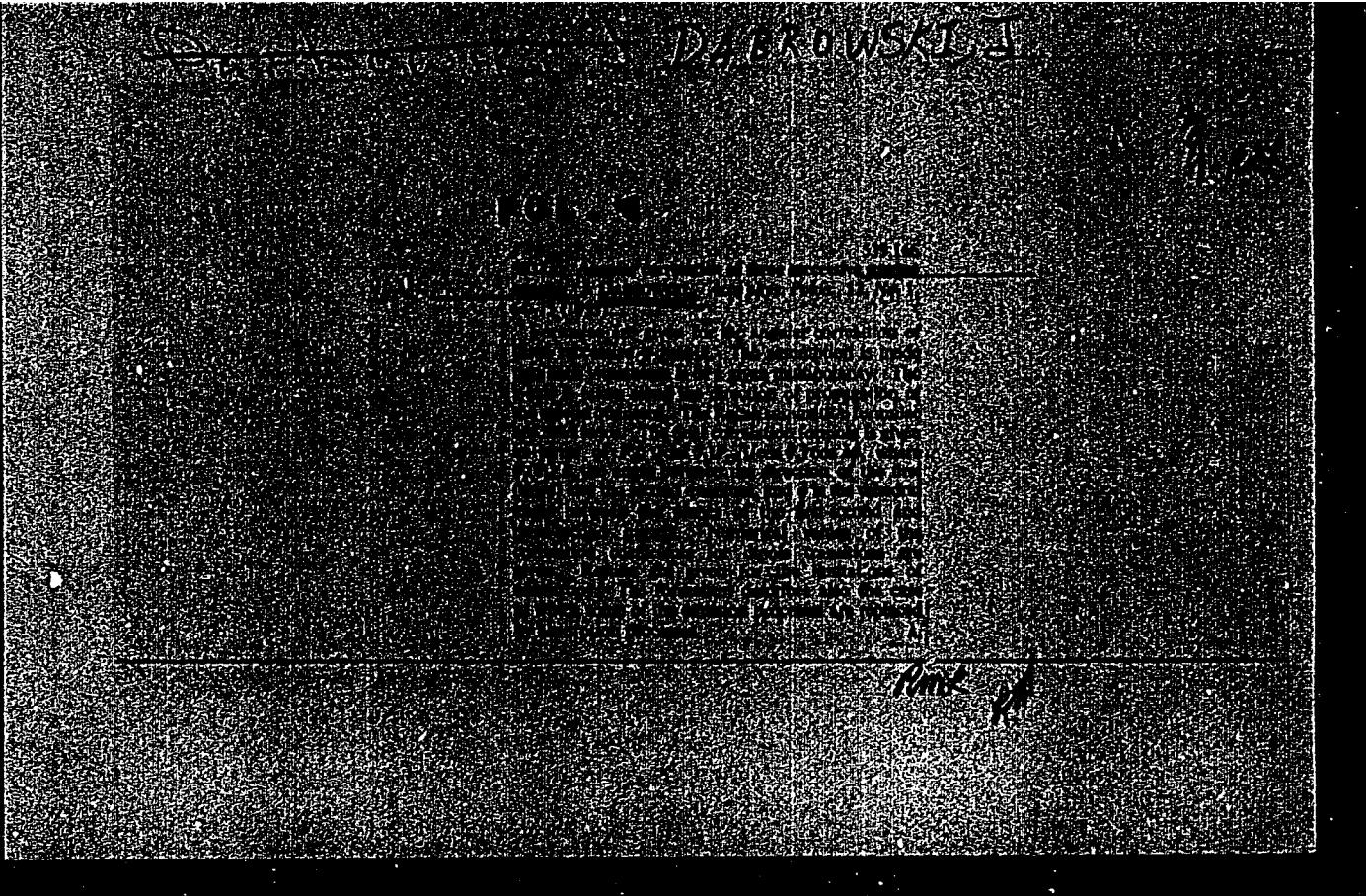


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DABROWSKI, J.

539.172.4

7373. Note on the  $^{7Li}(n, \gamma)^{7Be}$  reaction.  
DABROWSKI AND J. SAWICKI. Bull. Acad. Polon. Sci.

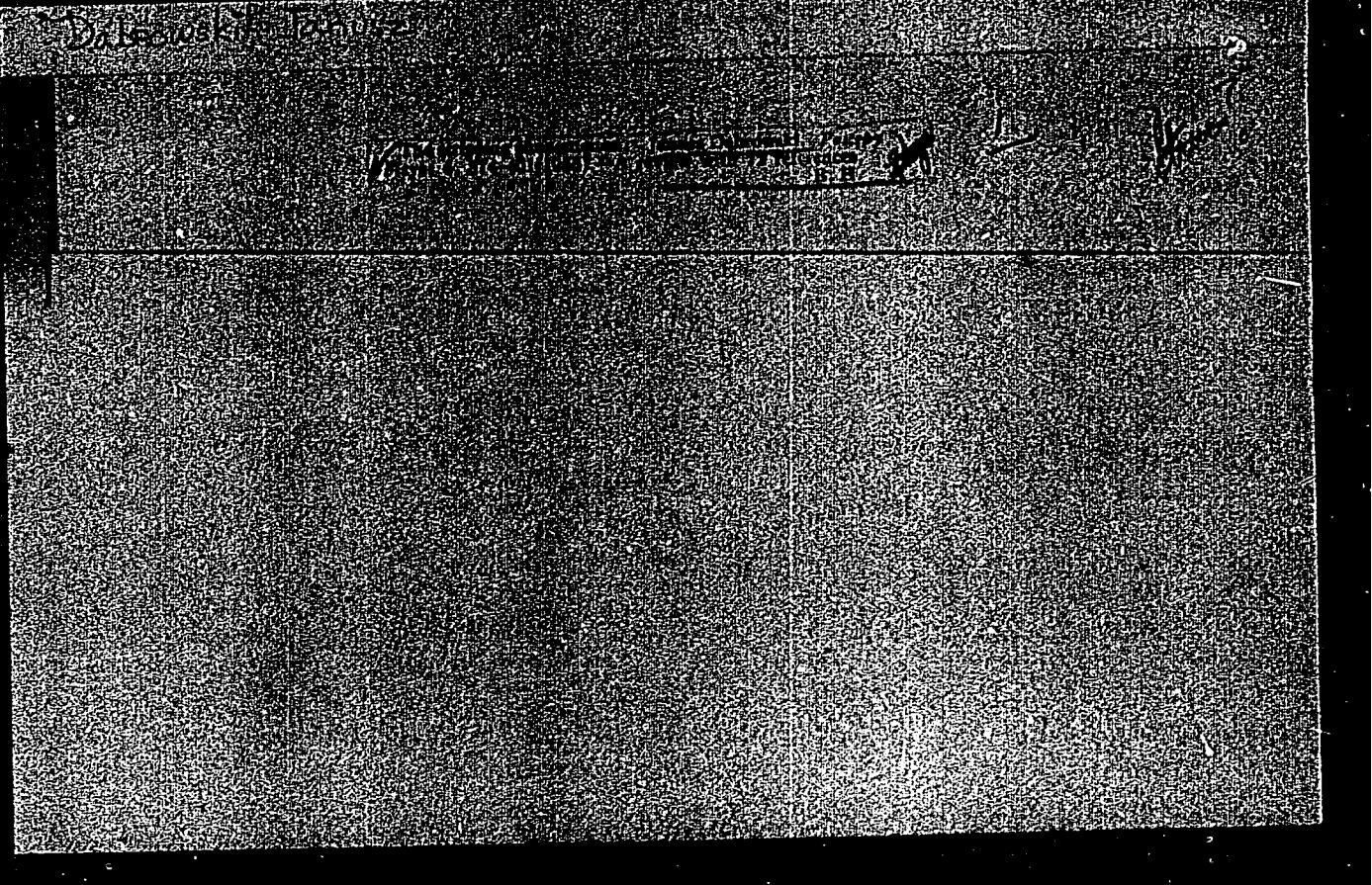
C. F. N. 40, 2, 51-6 (1955).

The differential cross-section is calculated with the assumption that the  $^{7Li}$  nucleus consists of a deuteron moving in the field of an  $\alpha$ -particle. The incoming neutron "knocks out" the deuteron and is itself captured. The  $n-\alpha$  interaction is largely ignored, and "pick-up" is neglected because the deuteron is treated as an elementary particle. Nevertheless fair agreement with experiment is obtained. J. M. Davies

DR. J. SAWICKI

"APPROVED FOR RELEASE: 07/12/2001

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APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520005-5"

DABR & SAWICKI  
Poland/Physical Chemistry - Atomic Nucleus, B-2

Abst Journal: Referat Zhur - Khimiye, No 1<sup>9</sup>, 1957, 43

Author: Dabrowski, J., and Sawicki, J.

Institution: ~~Nauk. Univ. of Warsaw, Poland~~

Title: Simple Model of the Li<sub>6</sub> Nucleus and the Neutron-Induced Reactions of Li<sub>6</sub>

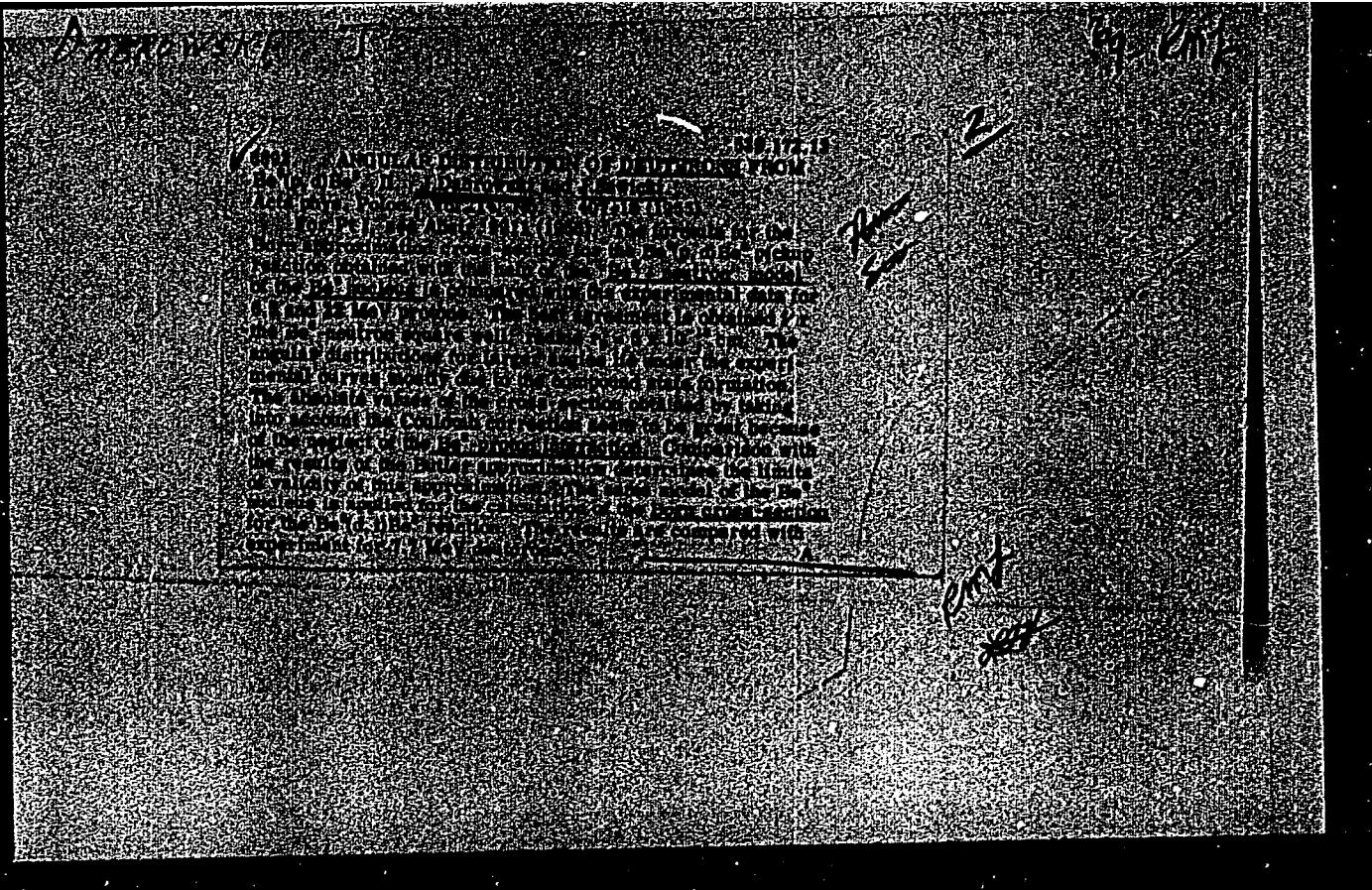
Original Periodical: Acta Phys. Polon, 1955, Vol 14, No 4, 323-335 (published in English with a Russian summary)

Abstract: The reactions Li<sub>6</sub>(n,t)He<sup>4</sup> and Li<sub>6</sub>(n,d)He are discussed with the aid of a simple model of the Li<sub>6</sub> atom in which it is represented as consisting of alpha particles and neutrons. It is supposed that both reactions are of the "fission" type. The correctness of this model is borne out both by energetic relationships and by the fact that the magnetic moment of Li<sub>6</sub>  $\mu \cong$  the magnetic moment of deuterons. The cross sections for both reactions were calculated by the Bornov approximation.

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"APPROVED FOR RELEASE: 07/12/2001

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DABROWSKI, JANUSZ

The original manuscript was submitted by James D. Dabrowski, 2420 1/2 S Street, N.W., Washington, D.C. A copy of the original manuscript was received by the Director of the Central Intelligence Agency, Robert M. Gates, dated January 15, 1963, via (open) classification. Edwin Goff

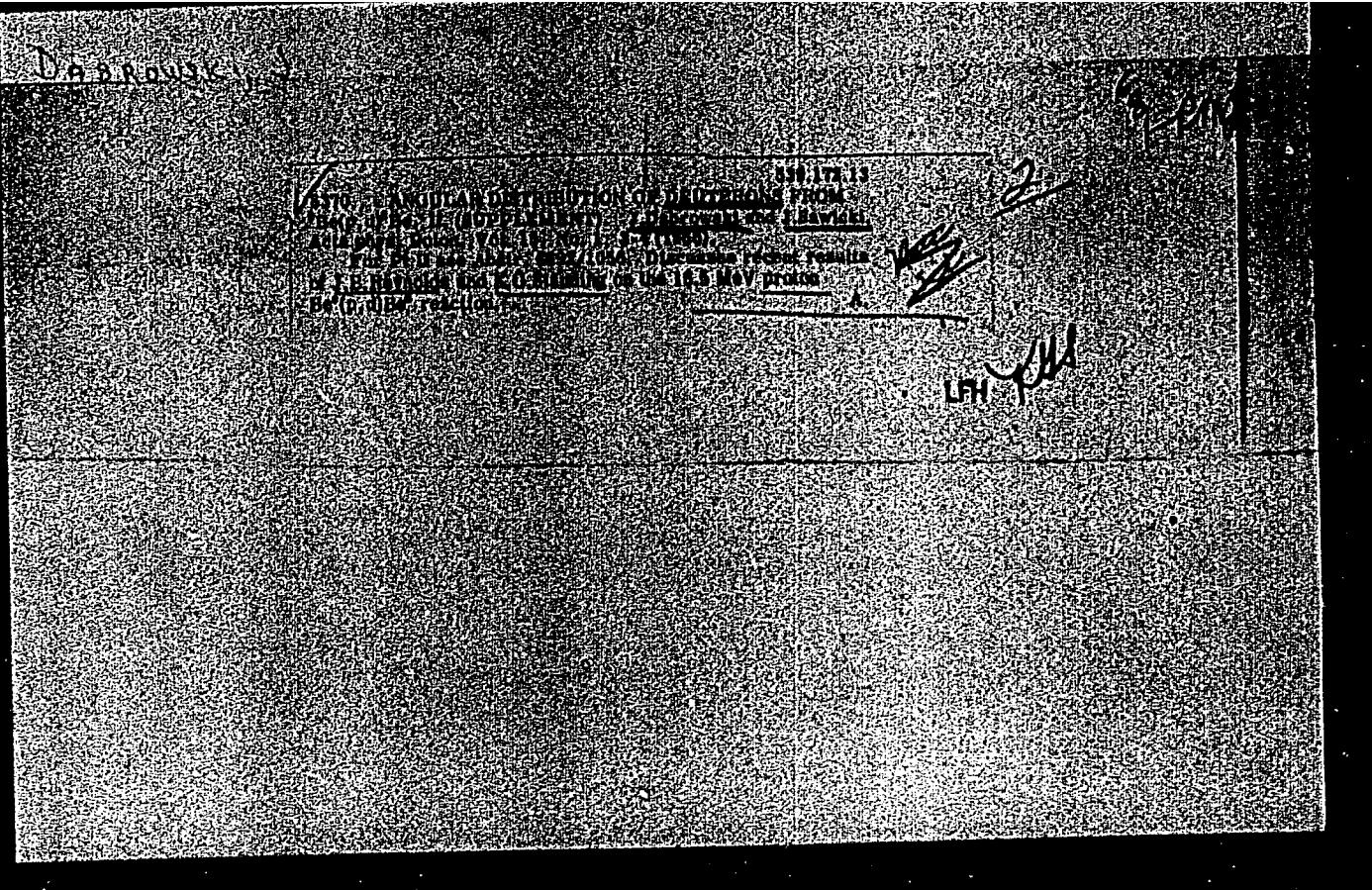
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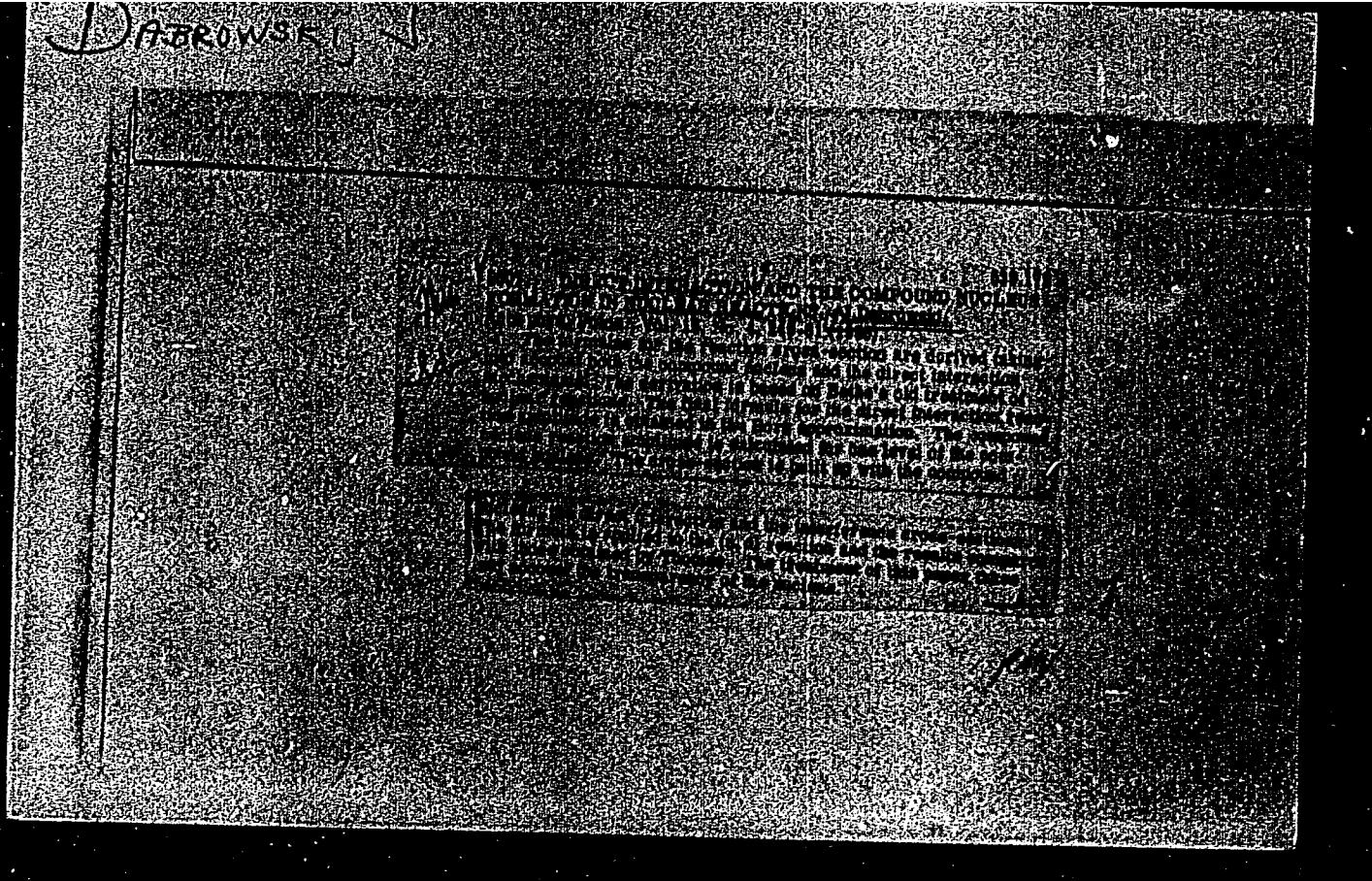


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CIA-RDP86-00513R000509520005-5"

Dabrowski, J.

POLAND/Nuclear Physics - Nuclear Reactions

C-5

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 10268

Author : Dabrowski, J., Sawicki, J.

Inst : Polish Academy of Sciences, Warsaw

Title : Angular Distribution of the Deuterons of the  $\text{Be}^9(\text{p},\text{d})\text{Be}^8$  Reactions. Angular Distribution of Deuterons From  $\text{Be}^9(\text{p},\text{d})\text{Be}^8$

Orig Pub : Acta phys. polon., 1956, 15, No 6, 431-434

Abstract : Errors are corrected in the calculation of the angular distributions of the reactions  $\text{Be}^9(\text{p},\text{d})$  and  $\text{Be}^9(\text{d},\text{t})$ , made in previous works (Referat Zhur Fizika, 1955, No 11; 24163; 1956, No 3, 6443; No 8, 22149, 1957, 3, No 6050). Most important corrections have been introduced in the absolute values of the cross sections. The corrected value of the calculated differential cross section of the reaction  $\text{Be}^9(\text{p},\text{d})$ , where  $r_0 = 5 \times 10^{-13}$  cm in the interval 5 to 8 Mev at  $\theta = 20^\circ$ , is 0.22 barns/steradian. The corrected values of the calculated differential cross sections of the  $\text{Be}^9(\text{d},\text{t})$  reaction, for  $r_0 = 5 \times 10^{-13}$  cm and  $r_0 = 7 \times 10^{-13}$  cm at  $\theta \leq 0$ , are 34

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POLAND/Nuclear Physics - Nuclear Reactions

C-5

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 10268

and 39 millibarns/steradian respectively instead of 87.12 and 72.30 millibarns/steradian. The corresponding total cross sections are 44 and 27 millibarns (instead of 110.9 and 50.6 millibarns). Corrected theoretical curves are given for the angular distributions at different values of  $r_0$  but their agreement with the angular distributions of the  $\text{Be}^9(\text{p},\text{d})$  remains the same as before.

Card : 2/2

DABROWSKI, J.

POLAND/Nuclear Physics - Nuclear Reactions

C-5

Abs Jour : Ref Zhur - Fizika, № 7, 1958, № 15150

Author : Dabrowski J., Lulczyjew R.

Inst : University of Warsaw, Poland

Title : Note on the  $^{12}\text{C}(\text{d},\text{p})^{13}\text{C}$  Reaction Near the 4 Mev Resonance.

Orig Pub : Acta Phys. polon., 1957, 16, № 3, 231-234

Abstract : The authors have calculated the differential cross section of the reaction  $\text{C}^{12}(\text{d},\text{p})\text{C}^{13}$  near resonance at 4 Mev. The formula proposed by Thomas (Referat Zhur Fizika, 1958, № 3, 5487) is used. No account was taken in the calculation of the Coulomb scattering and of the potential scattering. It was assumed that the particles participating in the formation of the compound nucleus have the following values of momenta:  $j_d = 2$ ,  $j_p = 1$ , and  $j_n = 1$ . The possible contribution of the momenta  $j_d = 4$  and  $j_p = 1$  were not taken into account. The total momenta  $J = 3$  and the width  $\Gamma = 0.5$  Mev were attributed to the excited level of the compound nucleus. The calculation was made in the Born and Butler approximation. The results

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14

POLAND/Nuclear Physics - Structure and Properties of Nuclei

C

Abs Jour : Ref Zhur Fizika, No 10, 1959, 22062

Author : Dabrowski, J.

Inst : University of Birmingham, Great Britain

Title : Binding Energy of the O<sub>16</sub> Nucleus with the Cluster Development Method

Orig Pub : Bull. Acad. polon. sci. Ser. sci. math. astron. et phys., 1958, 6, No 10, 635-643

Abstract : A brief report is given as a result of variational calculations of the binding energy of O<sub>16</sub> nucleus, carried out by the author earlier (Referat Zhur Fizika, 1958, No 12, 26946; 1959, No 6, 12451) with trial wave functions of the form

$$\Psi(1 \dots \Lambda) = \prod_{i < j} f(r_{ij}) \Psi(1 \dots \Lambda), \quad (1)$$

Card 1/2

S/058/62/000/010/033/093  
A061/A101

AUTHORS: Borysowicz, J., Dabrowski, J.

TITLE: Diffraction scattering of deuterons on non-spherical nuclei

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 46, abstract 10B350  
("Rept. Inst. badah Jądrow. PAN", 1961, no. 261/VIII, 16 pp., illust.,  
English; summaries in Polish and Russian)

TEXT: The scattering of deuterons on non-spherical nuclei is considered in diffraction approximation using the black nucleus model. The quadrupole nuclear deformations considered are assumed to be small. Both elastic and inelastic scattering cross sections are calculated. The angular distribution found for inelastic scattering differs little from the angular distribution for point particles. The results are illustrated by the example of the reactions  $O^{18}(d,d')O^{18*}$ ,  $Mg^{24}(d,d')Mg^{24}$ , and  $Mg^{24}(d,d')Mg^{24*}$ . Although the deuteron structure tells little on the character of the scattering angular distribution, the calculation of the finite deuteron dimensions leads to a diminution of the effective nuclear radius  $R_0$  and to an increase of the nuclear deformation parameters  $\beta$ . This leads to a ✓

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Diffraction scattering of...

S/058/62/000/010/033/093  
A061/A101

better agreement of the  $R_0$  and  $\beta$  values, obtained from the analysis of reactions with deuterons, with the values obtained from data of alpha particle scattering.

A. Sitenko

[Abstracter's note: Complete translation]

Card 2/2

21721

P/045/61/020/003/003/004  
B133/B228*24.6600*AUTHORS: Dabrowski, Janusz and Sobiczewski, Adam

TITLE: Optical model for nucleon-nucleus scattering

PERIODICAL: Acta Physica Polonica, v. 20, no. 3, 1961, 243-255

TEXT: The present paper deals with the derivation of the parameters of the optical potential for nucleon-nucleus scattering. The optical potential  $V$  for a nucleus with high mass number  $A$  is given by:

$$V = \sum_{i=1}^A \langle \psi_0 | t_{oi} | \psi_0 \rangle \quad (1)$$

The transition operator  $t_{oi}$  describing the scattering between the particle "o" and "i" in the presence of the other target nucleons satisfies the integral equation:

$$t_{oi} = v_{oi} + v_{oi} \frac{Q}{e} t_{oi}, \quad (2)$$

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Optical model for...

21721  
P/045/61/020/003/003/004  
B133/B228

where the operator  $Q$  excludes all the states occupied by the target nucleons, and  $e = E - H_A - T_0 - V + i\epsilon$ .  $V_{01}$  is the nucleon-nucleon interaction,  $E$  is the ground-state energy of the target nucleus plus the energy of the projectile,  $H_A$  the Hamiltonian of the target nucleus, and  $T_0$  the kinetic energy of the projectile. The approximations contained already in (1) were discussed by Sawicki (see references). An exceptional case for which one can easily solve Eq. (2) for the  $t$  matrix is the case of the separable potential:

$$\begin{aligned} \left(\frac{1}{2\pi}\right)^3 \int dr_{12} e^{-ip'r_{12}} v_{12} e^{ipr_{12}} &= \langle p' | v_{12} | p \rangle \\ &= -\frac{\lambda \hbar^2}{M} g(p') g(p) \end{aligned} \quad (10)$$

Depending on the form of the  $g$  function it is called "Yamaguchi potential" (Y) when  $g(p) = (p^2 + \beta^2)^{-1}$ , or "effective range potential" (ER) when

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Optical model for...

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$g(p) = (p^2 + \beta^2)^{-1/2}$ . One of the disadvantages of potential (10) is, that it acts in the S state only. The authors now want to improve the results for the optical potential obtained with the separable potential (10) by adding the contribution from higher (than S) partial waves in phase-shift approximation. To get the phase-shift approximation for the t matrix, they put the operator  $Q = 1$  in Eq. (2) and replace V by an energy-independent real potential. To calculate the optical potential  $V(k_0)$ , the following coordinates are introduced:

$$p = \left| \frac{k_0 - k_1}{2} \right|, \quad u = \left| \frac{k_0 + k_1}{2} \right| \quad (17)$$

In these coordinates

$$\int_{k_1 < k_F} dk_1 = \frac{16\pi}{k_0} \int_{(k_0 - k_F)/2}^{(k_0 + k_F)/2} dp p \int_{\max[(k_0 - p), \sqrt{k_F^2 - p^2}]}^{\sqrt{(k_0^2 + k_F^2)/2 - p^2}} du u \quad (18)$$

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X

21721

Optical model for...

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B133/B228

X

holds. After introduction of the dimensionless variables  $v = k_o/k_F$   
 $x = p/k_F$  one finally gets:

$$\begin{aligned} \text{Re } V(k_0) &= -\frac{2}{\pi} \frac{\hbar^2 k_F^2}{M} \frac{1}{v} \int_{(v-1)/2}^{(v+1)/2} dx \left[ \frac{1}{4} - \left( x - \frac{v}{2} \right)^2 \right] \left\{ g(x) \right\} \\ \text{Im } V(k_0) &= -\frac{2}{\pi} \frac{\hbar^2 k_F^2}{M} \frac{1}{v} \int_{(v-1)/2}^{(v+1)/2} dx \left[ \frac{1}{4} - \left( x - \frac{v}{2} \right)^2 \right] \left\{ f(x) \right\} \end{aligned} \quad (20)$$

where  $g$  is given by

$$g(p) = [\sum(\text{odd } j) + 3 \sum(\text{even } j)] (2j+1) \sin 2\delta_j + [\sum(\text{even } j) + 3 \sum(\text{odd } j)] \times \\ \times [(2j+1) \sin 2\eta_j + (2j+3) (\sin 2\eta_{j+1,s} + \sin 2\eta_{j+1,p})] + 3 \sin 2\eta_0 \quad (16)$$

The equation for  $f$  is obtained from Eq. (16) by replacing  $\sin 2\delta_j$ ,  $\sin 2\eta_j$  by  $\sin^2 \delta_j$ ,  $\sin^2 \eta_j$ , respectively. To improve the expression for  $\text{Im } V(k_0)$ , the authors take into account some of the effects of the exclusion principle. For this reason, they follow the Goldberger method known as the "frivolous model". Their rather intuitive approach leads to

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Optical model for...

21721  
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B133/B228

$$\text{Im } V_{Gd}(k_0) = -\frac{2\hbar^2 k_F^3}{\pi M} \frac{1}{y} \int_{(y-1)/3}^{(y+1)/3} dx [f(x)/x] \int_{\max\{(x-y), \sqrt{1-x^2}\}}^{\sqrt{(1+x^2)/(1-x^2)}} dy (x^2 + y^2 - 1) \quad (26)$$

where the index Gd indicates the Goldberger method.

where  $y$  is  $u/k_F$ , and Gd indicates the Goldberger method. To get numerical results, the optical potential is discussed as a function of the wave numbers of the incoming nucleon. Due to the approximations made in the derivation, satisfying results are expected only for neutrons and only for high energies. Figs. 1 and 2 show  $V$  as a function of the energy  $E_0$  of the incoming neutron. Corresponding results for the (ER) interaction are given in Table III. Because of the uncertainty of the experimental results, a comparison between theory and experiment is difficult. It seems that the experimental points favor the curves obtained by means of GT and SM phase shifts. There are 2 figures, 3 tables, and 25 non-Soviet-bloc references. The 3 most recent references to English-language publications

Card 5/q

21721

Optical model for...

P/045/61/020/003/003/004  
B133/B228

read as follows: Dabrowski, J. and Sawicki, J., Nuclear Phys. 13, 621 (1959); Nuclear Phys. 22, 318 (1961). Sawicki, J., Nuovo Cimento, 15, 606 (1960).

ASSOCIATION: Institute for Nuclear Research, Warsaw, and Institute for Theoretical Physics, Warsaw University, Warsaw (Janusz Dabrowski). Institute for Theoretical Physics, Warsaw University, Warsaw, and Warsaw Technical University, Warsaw (Adam Sobiczewski)

SUBMITTED: September 30, 1960

✓

Card 6/9

44297  
S/058/62/CCO/012/012/048  
A160/A101

24.6600

AUTHORS: Dąbrowski, Janusz, Borysowicz, Jerzy

TITLE: Diffraction scattering of deuterons on non-spherical nuclei. II.  
Deformation of arbitrary multipolarity

PERIODICAL: Referativnyy zhurnal, Fizika, no. 12, 1962, 62, abstract 12B430  
("Rept. Inst. badań jądrow. PAN", no. 300/VII, 1962, 10 pp., illus-  
trated, English; summaries in Polish and Russian)

TEXT: The theory of the diffraction scattering of deuterons on nuclei, by Akhiyezer and Sitenko, is generalized for a case of deformed nuclei with a surface deformation of an arbitrary multipole order. The nucleus is assumed to be black. The calculations were carried out in a linear approximation by the parameters of the nucleus deformation. The calculated angular distribution proved to be close to the angular distribution obtained by Drozgov and Blair for the diffraction scattering of nucleons on non-spherical nuclei. A consideration of the deuteron structure results in a decrease of the parameter  $R_0$  (the interaction radius) by  $1/4$  of the deuteron radius  $R_d$ , and in a multiplication of the

Card 1/2

Diffraction scattering of deuterons on...

S/058/62/000/012/012/048  
A160/A101

parameter of deformation  $|3_1|$  by the multiplier  $(1 + (3/8)R_d/R_o)$  in the expression for the scattering cross section. See also Referativnyy zhurnal, Fizika, 1962, 8B368; 10A350, 10A416.

A. S.

[Abstracter's note: Complete translation]

Card 2/2

DABROWSKI, Janusz

A summer school on nuclear physics in Varenna, Italy, August  
1961. Postepy fizyki 13 no.1:103-110 '62.

24,7000(1144,1160,1385)

33783  
P/045/62/021/002/004/007  
B137/B102

AUTHORS: Dabrowski, Janusz, Sobiczewski, Adam, and Zielińska,  
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TITLE: Calculation of the optical potential with the nucleon-nucleon phase shifts in the Thomas-Fermi approximation

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TEXT: The authors calculate the radial distribution of the optical potential  $V$  for nucleon-nucleus scattering at an energy of  $E_0 \gtrsim 50$  Mev with the aid of the empirical nuclear density  $V = V_0 + \Delta V$ , where  $V_0$  is the optical potential calculated with the free nucleon-nucleon scattering operator  $t_0$ , and  $\Delta V$  is a correction owing to the exclusion principle.

The Thomas-Fermi approximation is used to calculate  $V$  for a finite nucleus. The optical potential is expressed with the aid of nucleon-nucleon phase shifts. The nuclear density  $\rho(r)$  is assumed to be identical with the charge distribution determined from Hofstadter's electron scattering experiments. For numerical calculations of  $V$  the Signell-Marshak nucleon-

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nucleon phase shifts are used.  $\Delta V$  increases the depth of the real part of the optical potential, and decreases that of the imaginary part. The corrections are more important at higher densities. Calculations were carried out for  $E_0 = 50, 80$  and  $120$  Mev. The shape of the optical potential  $V$  is discussed in terms of the half-way radius  $R_{r(1)}$  and the surface thickness  $s_{r(i)}$ , where  $r$  and  $i$  stand for real  $R_r \approx R_p + 0.1 f$ , and  $s_r = s_p$ .  $R_p$  is the half-way radius, and  $s_p$  is the surface thickness (the distance over which the density drops from 90 % to 10 % of its peak value)  $f$  is the unit of length in fermis.  $s_r = 2.20$  is found, which agrees with experimental results ( $s_r = 2.6 - 3.1 f$  for surface absorption below 50 Mev, and  $s_r = 2.0 - 2.2$  for volume absorption throughout the whole energy range). The difference  $R_r - R_p = 0.1 f$  is too small as compared with experimental results ( $0.8 \pm 0.3 f$ ). The values for  $\text{Re } V(0)$  are too big by 20 Mev as compared with experiment. It can be concluded from the experiments that  $\text{Re } V$  has practically the same radial distribution as the nuclear density with a corresponding depth, bigger than is usually assumed.  $R_i - R_p = 0.25$ , Card 2/3

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0.15, 0.10 f is found for  $E_0 = 50, 80$  and 120 Mev, respectively. The calculated depth -Im V(0) is in good agreement with the experimental values given by Bjorklund. There are 2 figures, 1 table, and 11 non-Soviet references. The four most recent references to English-language publications read as follows: Bjorklund, F., Proceedings of the International Conference on the Nuclear Optical Model. The Florida State University Studies, No. 32, 1, 1959; Hahn, B., Ravenhall, D., and Hofstadter, R., Phys. Rev., 101, 1131 (1956); Kerman, A. K., McManns, H., and Thaler, R.M., Ann. Phys. (New York), 8, 551 (1959); Signell, P. S., and Marshak, R. E., Phys. Rev., 109, 1229 (1958). f

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